

ABSTRACT OF THE DISCLOSURE

There is provided an ATM optical signal matching apparatus which includes a plurality of photoelectric conversion parts for photoelectric-converting input data, a plurality of user-network matching parts for processing 5 signals transmitted/received through the photoelectric conversion parts, a bus switch for exchanging signals with the plurality of user-network matching parts, a loop back processor for returning a signal received through the bus switch to an original transmitter sending the signal according to a predetermine control signal, and a controller for providing a control signal to the user-network 10 matching parts and the loop back processor according to a program stored therein. The invention supports multi-line optical signal matching function to improve space utility, increase economic effect and provide high-rate data (especially, multimedia data) service at 155Mbps or more. Furthermore, the ATM optical signal matching apparatus of the invention includes the loop back 15 processors connected to maintenance device to accurately find out points having problems rapidly.